

THE BROWN HAIRSTREAK BUTTERFLY (*THECLA BETULAE* L.), IN IRELAND: AN EXAMINATION OF ITS HISTORICAL AND CURRENT STATUS

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Abstract. The brown hairstreak (*Thecla betulae* L.) is probably Ireland's most under-recorded butterfly species. It is known, from recent data, to be restricted to Counties Clare, Galway and Tipperary. Where it occurs, it may be considered frequent but not generally common.

INTRODUCTION

Entomological literature suggests that the brown hairstreak is rare and extremely local in Ireland. Although it is often retiring and secretive by nature, this, combined with a paucity of published records and a dearth of recorders have, in the writer's opinion, been responsible for the patchy and incompletely recorded distribution. In his classic work *Butterflies* (1945), E. B. Ford did not dispute the fact that *T. betulae* occurred in Ireland but he was critical of those who claimed it to be of frequent occurrence. Curiously, he omits the species from the Irish distribution map, a fact observed by Huggins (1951). Edward Meyrick (1928) refers to it as being local in western Ireland whilst, on the other hand, Newman & Mansell (1968) alluded to it as being absent from Ireland.

EARLY RECORDS

Under the heading 'Notes on the Lepidoptera of Ireland', Edwin Birchall (1865), the Father of Irish Entomology wrote, "This species (*Thecla betulae*), usually considered a scarce insect in the British Islands, occurs abundantly in the west of Ireland. In August 1863, I saw it in great numbers near Galway, hovering over bramble blossoms, and at Killarney sparingly last August. It is active on the wing, but will only fly during sunshine, settling on the flowers when the sun is obscured even by a passing cloud, and if the weather is at all cold or wet, is so lethargic as to allow itself to be taken readily with the fingers. One wet afternoon in Galway I obtained about sixty specimens, mostly in fine condition, by this method. The curious onisciform larvae I have beaten in June from stunted blackthorn bushes". In 1866 he wrote that the brown hairstreak had not been taken in Ulster or Leinster.

Birchall (1819–1884) was apparently a man of leisure who travelled extensively throughout Ireland. It has been suggested, however, that in his writings he was prone to exaggeration, and W. Francis de Vismes Kane (1893) doubted whether the brown hairstreak was ever so abundant as he had suggested. This view is supported by Raymond F. Haynes (1916–1997) who, in an unpublished 'Guide to the Lepidoptera of the Killarney District', wrote "I am well aware that the validity of several of Birchall's records and some of his statements regarding the abundance of certain insects has been questioned. H. C. Huggins has suggested that Birchall was a careless writer and, certainly, some of Birchall's papers appear rather improbable to modern entomologists". Nevertheless, Birchall's literary output, which included more than fifty papers, has left an indelible legacy. Although some of his records have been

questioned, recent work confirms those for Clarinbridge and Oranmore, Co. Galway, were correct.

Most published records of the brown hairstreak are ancient, dating from the end of the 19th century and early years of the 20th. Kane's 'Catalogue' includes the Birchall records from Clarinbridge and Oranmore, as well as those from Blarney, Co. Cork (G. F. Mathew), Killoughrim Forest, Co. Wexford (C. B. Moffat) and Co. Kerry (Kane himself).

Under the title 'On the occurrence of *Gonepteryx rhamni* and *Thecla betulae* in Kerry' (1856), Andrews had noted "last year, however, in the month of August, in a secluded part of Muckruss, Killarney, in one of those tortuous mountain paths screened from the breeze, amidst the bright rays of an autumnal sun lighting up the sprays of the buckthorn and honeysuckle, the brimstone butterfly might be seen in numbers, basking in the sun's glare . . . near the same locality the brown hairstreak (*T. betulae*), a rare insect in Ireland, a single specimen, was met with . . . Mr. Andrews illustrated his remarks by specimens of the insects referred to". Incidentally, *G. rhamni* was, and is, an extremely rare insect in Co. Kerry so both records are noteworthy.

The Entomologist's Monthly Magazine for 1865 contains a short note, under the heading '*Thecla betulae* near Cork', written by Gervase F. Mathew from HMS *Warrior*. Matthew, who was Paymaster-General, had recorded other Irish insects. He states that, whilst visiting Blarney Castle on 5th August 1864, he observed the species flying over lying brushwood. As the purpose of his visit had been sightseeing, he did not have the opportunity of taking any specimens. Newman also quotes this record in his *Natural History of British Butterflies and Moths* (1869).

Charles Bethune Moffat (1859–1945) was, according to Robert Lloyd Praeger (1865–1953), the "most accomplished naturalist Ireland has produced". An extract from the Editorial of *The Irish Naturalists' Journal* for April 1946 stated "his passing means that this country has lost its foremost vertebrate zoologist and one of the keenest nature observers it ever possessed". He contributed extensively, on a wide range of subjects, to both *The Irish Naturalist* and *The Irish Naturalist's Journal*. The former Journal carried, in 1894, a brief note mentioning the occurrence of *Thecla betulae* in Killoughrim Forest, Co. Wexford. Five years prior to this, he had sent two specimens (male & female) from this locality to Kane who subsequently confirmed that these were the only Irish examples he had seen. Moffat, like Birchall, also caught specimens between finger and thumb, whilst walking through the forest. Interestingly enough, he gives Killoughrim as the locality for three other uncommon Irish butterflies, i.e., *Quercusia quercus* L. (purple hairstreak), *Erynnis tages* ssp. *baynesi* Huggins (dingy skipper) and *Eurodryas aurinia* ssp. *hibernica* Birchall (marsh fritillary). A further record appeared in *The Irish Naturalist* (1918) noting the sighting, but not capture, of a female brown hairstreak on 13 August 1918 in a wooded area of Urrin Valley, close to Kiltrea, Co. Wexford. At that time, this location was approximately one mile from the boundary of Killoughrim Forest. He speculated that the forest might have once incorporated this region and his observation suggests an example of localised survival. Notice is also drawn to the fact that the species had, of recent years, been rather scarce. This is the last known Co. Wexford record of *T. betulae*. There can be little doubt that Moffat's records were authentic, given that he had forwarded specimens to Kane for verification.

Robert Albert Philips (1866–1945) is, along with Harry Fogarty, most famously remembered for his discovery of *Boloria euphrosyne* L. (pearl-bordered fritillary) at Cloncoose, in the Burren, in June 1922. He also took *T. betulae* at Portumna, Co. Galway on 3 September 1924 and 21 August 1927, thus adding south Co. Galway to

the known Irish localities for the species. There are five of his specimens (4 female & 1 male) in the National Museum of Ireland, (Dr James O'Connor, pers. comm.). The condition of these specimens suggests that they were taken by the method already referred to by Birchall and Moffat, i.e., between finger and thumb.

Revd W. Sabine reported that he took specimens of the brown hairstreak at Portlaw village, Co. Waterford in 1939. This information was conveyed to E. S. A. Baynes by Major Philip P. Graves (1876–1953) and subsequently included in his *Revised Catalogue of Irish Macrolepidoptera* (1964), but without mention of the date of capture. Huggins' 1951 note in *The Entomologist*, already mentioned, did not shed any new light on distribution or status but was a brief summary, quoting the records of Philips and Mathew.

RECENT RECORDS

A List of Irish Butterflies (Baynes, 1960) stated that *T. betulae* was "reported in the past from south Galway, Wexford, north Kerry and mid Cork and more recently from Portumna, south Galway (1927)".

The next published data, confirming new sightings, were those of Haynes (1963). On 11.vi.1962, he beat fifteen larvae from sloe at Clarinbridge, Co. Galway. He retained seven for rearing, dispatched two to Baynes for inclusion in his *Catalogue of Irish Macrolepidoptera*, and returned the remainder to the foodplant. On 15 June, Baynes wrote to Mr Haynes congratulating him on his discovery of *betulae* larvae at Clarinbridge. "I have tried beating for them several times in different parts of Co. Galway, but have never found any. You need, I think, have no qualms about the record being doubted because one result of the publication of my Dublin Museum Butterfly List, was to bring to light a quite reliable, but unpublished, record of several of the butterflies being seen near Ballinahinch in 1952 (Co. Galway: J. L. Messenger). Personally, I have never had any serious doubt that the insect was still to be found in Ireland. You have the distinction of being the first lepidopterist to find the larvae for a great many years. Thank you very much for sending me two of the larvae. They arrived safely, and are now feeding on plum. I would ask you to agree to the following: if the insects are of the same sex I will pass one onto the Museum, but if they turn out to be one of each sex, then I hope you will allow me to keep both at any rate until such time as I may be able to rear some of my own. Actually, as I expect you know, the Museum has Philip's specimens from Portumna, though their condition leaves much to be desired". Raymond F. Haynes' record subsequently appeared in the revised Catalogue. The Haynes Collection in the Ulster Museum, Belfast contains seven specimens of *T. betulae* from Clarinbridge (Dr Brian Nelson, pers. comm.).

McCutcheon (1965) reported the capture, on 21.viii.1964, of a single female feeding from bramble blossom, at Luska, Lough Derg, approximately ten miles north of Nenagh, Co. Tipperary. Nash and Hardiman (1999) reported single specimens observed on 15, 21 and 25.viii.1996 on the eastern side of Lough Derg, Tipperary. These sites are not altogether far removed from Luska, the location of McCutcheon's sighting. As discussed by Nash & Hardiman, and referral to the Distribution Map, it seems that this is not an increase in the species range, but, most likely, localised survival following habitat fragmentation.

There are a number of records for the period 1960 to 1988, (Trevor Boyd, pers. comm.). In 1980, T. W. Tolman undertook an extensive survey in Co. Clare and Galway, and amassed a considerable amount of data. This work has, in the long term, proven to be of immense importance, *T. betulae* being encountered in eighteen

10 km squares. This is, effectively, the most intensive survey of the insect's Irish distribution ever undertaken.

A more recent account of the brown hairstreak in Ireland is Lavery & O'Sullivan (1986). The capture of two specimens, one of each sex, on 18.viii.1984, was reported from Lough Gealain in the Burren. It was of considerable surprise to both of us that the brown hairstreak was flying on a day, which was overcast, with incessant drizzle, interrupted by occasional heavy showers. The literature has always alleged that *T. betulae* will only fly in sunny conditions and, our first ever excursion to try to encounter the species was made under the most appalling conditions imaginable! It is ironic however, that Donovan, after over fifty years' experience, had not seen a live Irish specimen. It seems, also, that no other published records exist from the Burren, prior to 1986. However, O'Sullivan (1990) cites the species having been encountered, as both ova and imagines on 18.viii.1984 and also 1.vi & 2.vi.1986, 31.v.1987 and 29.v.1988, in the larval stage.

Trevor Boyd, the Northern Ireland Butterfly Recorder has written (pers. comm.) that "there have been no confirmed records of the brown hairstreak in the northern part of Ireland, there have been reports of possible sightings which were never able to be reliably authenticated. William Brush of Aughnacloy, Co. Tyrone, believed to be an excellent observer, reported a 'definite' sighting at Ravellea near Aughnacloy on 8.x.1970, with two other possible sightings there on 16.ix.1977 and 15.ix.1981, but he was too far away to be certain. He also reported a possible sighting on the edge of Reilly Wood, Co. Fermanagh in 1987 but, again, could not be sure. Roy Anderson, a professional entomologist from Newforge, Belfast, specialising in Coleoptera, believes he might have seen one at Reilly Wood in either 1984 or 1987, although the latter year may refer to William Brush's sighting". It is unfortunate, in view of the above, that no specimens can be produced as evidence for the existence of *T. betulae* in Northern Ireland as this would be an exciting development. Mr Boyd concludes "we continue to hope that we may find a colony of brown hairstreak in Northern Ireland; there is certainly suitable habitat, but it would be remarkable if it were so as it is so far from its southern range in Clare, Tipperary and south Galway".

Michael Salter of Dundalk has furnished the following information (pers. comm. and subsequently, Salter, 1999), "first encountered in 1980 when in May, I beat eight larvae from blackthorn at Cloughballymore, Ballinderreen (Grid 139/215). On reporting this to Eanna Ni Leamhna, I learnt that I was 'beaten to the post' by Dr. Tolman who had reported ova from eighteen adjacent 10 km squares earlier that spring. I wrote to E. B. Ford in Oxford since he had expressed doubt about this species occurring in Ireland in the NN *Butterflies*. I obtained five female and one male imagines. Subsequent years continued to find ova/larvae in reasonable numbers, especially around Boston/Lough Bunny, Co. Clare—would list them as 'frequent'. In the last two years, I have assisted David Nash in establishing whether the species still inhabits the area delineated by Tolman, roughly Claregalway to Ennis and Black Head to Craughwell. They are confirmed in thirteen of the eighteen of Tolman's squares—whilst not finding evidence in three of the remaining Squares is, in my opinion, of little importance since Tolman's reports were from the margins of these respective Squares: Square 12/18—Corrofin 128/189, Square 15/21—Craughwell 150/219 and Square 15/22—Stoneleigh 150/222. The remaining two Squares, 13/22—Oranmore and 13/23—Claregalway, are the most environmentally altered as they are now both within the Galway suburbs, whether they have been eliminated or are just harder to find remains the question".

Salter concludes that "in 1996, I quite unexpectedly found larvae on the western side of Corrib (126/231) and, consequently, at a number of further sites in this 10 km

Square, 12/23 and three others 11/23, 11/24 and 12/24. I doubt if this is an increase in the brown hairstreak's range in recent times as it seems so well established and I also encountered two other 'Burren' species, the small blue and dingy skipper at the same time, neither of which has been previously reported from there".

During the mid-1980s, the Burren colonies, most especially those around Cloncoose and Lough Gealain, close to Mullaghmore were threatened by over-collecting. It was evident that large numbers of larvae were being systematically beaten out and the foodplant damaged. It is impossible to gauge the scale of the damage inflicted at this time, but recent visits to these localities have shown little evidence of interference with sloe, suggesting that this threat has now abated.

DEDICATION

This article is dedicated to the memory of Raymond F. Haynes, of Killarney, Co. Kerry. Raymond had lived at Killarney since 1976 and, prior to settling in the area, had been a regular visitor to Ireland. He exhibited an almost unparalleled dedication to recording the local moths and butterflies. His collection, now housed at the Ulster Museum in Belfast is testament to a lifetime's work and his passing away, on 3rd June 1997, has left Irish entomology much the poorer for his loss.

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REFERENCES

- Andrews, W. 1856. On the occurrence of *Gonepteryx rhamni* and *Thecla betulae* in Kerry. *Natural History Review (1855/1856)*, *Proceedings of the Societies* 3: 68.
- Baynes, E. S. A. 1960. *A List of Irish Butterflies*. National Museum of Ireland.
- Baynes, E. S. A. 1963. *Thecla betulae* L. (Lep. Lycaenidae) in Ireland. *Entomologist's Gazette* 14: 124.
- Baynes, E. S. A. 1964. *A Revised Catalogue of Irish Macrolepidoptera*. Classey.
- Beirne, B. P. 1985. Irish Entomology: The First Hundred Years. Special Entomological Supplement. *The Irish Naturalists' Journal*.
- Birchall, E. 1865. Notes on the Lepidoptera of Ireland. *Entomologists Monthly Magazine* 1: 270.
- D'Arcy, G. & Hayward, J. 1992. *The Natural History of the Burren*. Immel Publishing.
- Emmet, A. M. & Heath, J., eds. 1989. *The Moths & Butterflies of Great Britain & Ireland* 7 (1). Harley Books.
- Ford, E. B. 1945. *Butterflies*. New Naturalists Series. No. 1. Collins.
- Frohawke, F. W. 1924. *The Natural History of British Butterflies*. Hutchinson. 2 Vols.
- Frohawke, F. W. 1934. *The Complete Book of British Butterflies*. Ward & Lock.
- Heath, J. et al. 1985. *Atlas of Butterflies in Britain & Ireland*. Viking.

- Haynes, R. F. 1963. Notes on Lepidoptera in the West of Ireland. *The Irish Naturalists' Journal* **14**: 175.
- Haynes, R. F. 1966. *Lepidoptera of the Killarney District*. Unpublished.
- Hickin, N. (ed. Lavery T. A.) 1992. *The Butterflies of Ireland. A Field Guide*. Robert Rinehart Publishers.
- Howarth, T. G. 1984. *Colour Identification Guide to the Butterflies of the British Isles*. Viking.
- Huggins, H. C. 1951. *Thecla betulae* in Ireland. *The Entomologist* **84**: 69.
- Kane, W. F. de v. 1893. Catalogue of the Lepidoptera of Ireland. *The Entomologist* **26**: 69–73, 117–121, 157–159, 187–190, 212–215, 240–244, 269–273.
- Lavery, J. W. & O'Sullivan, M. J. 1986. Quest for *T. betulae* (Brown Hairstreak) in Ireland. *Bulletin Amateur Entomologists' Society* **45**: 190.
- McCutcheon, W. I. 1965. *Thecla betulae*, Brown Hairstreak Butterfly in Co. Tipperary. *The Irish Naturalists' Journal* **15** (2): 55.
- Mathew, G. F. 1865. *Thecla betulae* near Cork. *The Entomologist's Monthly Magazine* **1**: 116.
- Meyrick, E. 1928. *Revised Handbook of British Lepidoptera*. Watkins & Doncaster.
- Moffat, C. B. 1895. *Thecla betulae* in Co. Wexford. *The Irish Naturalist* **4**: 78.
- Moffat, C. B. 1918. New Locality for *Thecla betulae*. *The Irish Naturalist* **27**: 172.
- Nash, D. W. & Hardiman, D. M. 1999. The brown hairstreak *Thecla betulae* L. (Lepidoptera) in North Tipperary (H10). *The Irish Naturalists' Journal* **26** (7/8): 277–278.
- Nash, R. 1975. The butterflies of Ireland. *Proceedings & Transactions of The British Entomological and Natural History Society* **7**(3): 69–73.
- Newman, L. H. & Mansell, E. 1968. *The Complete British Butterflies in Colour*. Ebury Press.
- Ni Leamhna, E. 1978. *Provisional Atlas of Butterflies in Ireland*. An Foras Forbatha.
- O'Sullivan, M. J. 1990. Burren Lepidoptera. *Bulletin Amateur Entomologists' Society* **49**: 37–45.
- Salter, M. 1999. An extension of the Irish range of the brown hairstreak *Thecla betulae* (L.) (Lepidoptera: Lycaenidae). *The Irish Naturalists' Journal* **26** (5/6): 203.

ADVICE ON THE REPORTING, LICENSING AND IDENTIFICATION OF ALIEN, OR EXOTIC, INVERTEBRATE PLANT PESTS

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NOTIFICATION TO MAFF OF ALIEN INVERTEBRATE PLANT PESTS

Plant Health legislation is aimed at preventing the introduction, establishment and spread of alien plant pests. Findings of such harmful organisms must be reported (address 1, below), in order to ensure that the risks are properly assessed, and managed accordingly. Suspicion that an invertebrate is alien is sufficient to require notification. Although most exotic plant pests are intercepted on imported plants and plant material, some are occasionally found in outdoor situations. The assistance of entomologists and the general public, in bringing such pests to the attention of the Plant Health authorities, plays a vital role in preventing the establishment and spread of harmful species originating from other countries.

A large number of invertebrate plant pests (insects, mites and nematodes) are listed in the Annexes of the European Community (EC) Plant Health Directive (2000/29/EC). However, other 'unlisted' organisms, which may be of plant health significance, are also regularly intercepted in the UK. One role of the Plant Health authorities is to determine the risks posed by such organisms, and where necessary to take action to contain and eradicate them.

Invertebrates arrive in the UK both by natural means and with human assistance. *The Plant Health (Great Britain) Order 1993* (Anon., 1993a) and the *Plant Health (Forestry) (Great Britain) Order 1993* (Anon., 1993b) prohibit the importation of